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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,629	12/05/2003	Gerd Huismann	ITW 14417.70	9082

23721 7590 02/07/2006

CORRIGAN LAW OFFICE
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APPLETON, WI 54915

EXAMINER

SHAW, CLIFFORD C

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/728,629	Applicant(s) HUISMANN ET AL.	
	Examiner Clifford C. Shaw	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 1-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 54-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>see para. #1</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1.) The following information disclosure statement (IDS) forms 1449 are attached to this Office action: papers nos. 0927, 0103, 1101, 0527A, 0527B, 0120A, and 0120B. In regard to paper no. 0927 (i.e., the form 1449 corresponding to the IDS filed on 9/27/2004), applicant is to note that the "Foreign Patent Documents" and the "Other documents" listed thereon have not been considered. Applicant has not provided copies of these documents or indicated where they might be found. If applicant wishes these documents to be considered, he should resubmit an IDS listing them along with copies of the same or a statement in the IDS indicating that copies of the documents were filed in a particular prior application.

2.) In his response filed on 11/14/2005 to the restriction requirement mailed on 11/02/2005, applicant elects, without traverse, the invention of group II (claims 54-61) for further prosecution. Accordingly, claims 1-53 are withdrawn from further consideration as being directed to a non-elected invention and claims 54-61 are examined in the instant Office action.

3.) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4.) Claims 54, 55, 58, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimbrough et al. (4,301,355). Figure 8 and the discussion at columns 5-8 of the patent to Kimbrough et al. (4,301,355) disclose a method of arc welding wherein: a wire 11 is moved into a pulsed arc 14 and consumed there; the arc voltage is monitored at elements 20 and 29; and the wire feed speed is controlled to be proportional to the arc voltage through elements 33 and 54, assuming the system is in the "CCODW" mode. In this "CCODW" mode, the wire feed speed will increase with an increase in arc voltage and will decrease with a decrease in arc voltage. The claims differ from Kimbrough et al. (4,301,355) in calling for control based on the occurrence of a short circuit. This difference does not patentably distinguish over the prior art. Undesired short circuits are common in arc welding. It is considered obvious that random short circuits will occasionally occur in the pulsed arc welding arrangement of Kimbrough et al. (4,301,355) due to imperfections in the electrode and electrode feed system or because of unexpected variations in workpiece geometry. Since the method of Kimbrough et al. (4,301,355) controls the wire feed to be directly proportional to sensed arc voltage and since a short circuit inherently produces a zero or very low voltage at the welding electrode, the wire feed speed will necessarily be retarded or slowed in the system of Kimbrough et al. (4,301,355) upon the occurrence of a short circuit, thereby satisfying the claims.

5.) Claims 54-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimbrough et al. (4,301,355) taken with WIPO document no. WO 00/64620 (cited by applicant). Figure 8 and the discussion at columns 5-8 of the patent to Kimbrough et al. (4,301,355) disclose a method of arc welding wherein: a wire 11 is moved into a pulsed arc 14 and consumed there;

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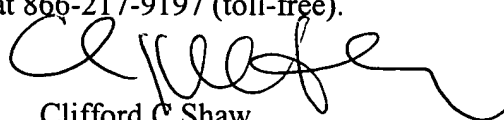
the arc voltage is monitored at elements 20 and 29; and the wire feed speed is controlled to be proportional to the arc voltage through elements 33 and 54, assuming the system is in the “CCODW” mode. In this “CCODW” mode, the wire feed speed will increase with an increase in arc voltage and will decrease with a decrease in arc voltage. The claims differ from Kimbrough et al. (4,301,355) in calling for control based on the occurrence of a short circuit and claims 57 and 61 further differ in calling for reversing wire feed in the event a short circuit is detected. These differences do not patentably distinguish over the prior art. The WIPO document no. WO 00/64620 discloses a short circuit welding method wherein “once the arc voltage drops to and/or below a process-based pre-set minimum value, the feed movement is stopped and/or the direction of the feed movement is reversed” (see page 7, third full paragraph of the English translation provided by applicant). On the basis of the English abstract, it is clear that this “minimum value” of the arc voltage corresponds to a short circuit between the welding electrode and workpiece. The WIPO document no. WO 00/64620 further teaches “The described embodiment is used mainly in a so-called short arc welding in which the material handling takes place in the short circuit phase of the arc 15. However, it is also possible to use this welding method even for other welding processes”(see last paragraph on page 10 of the English translation provided by applicant). It would have been obvious to have provided the system of Kimbrough et al. (4,301,355) with the wire feed speed control features taught by WIPO document no. WO 00/64620, the motivation being the teachings of WIPO document no. WO 00/64620 that this control approach can be applied to processes other than short-circuit welding and the further motivation being to secure the low spatter aspects of the WIPO document no. WO 00/64620 approach for the method of Kimbrough et al. (4,301,355).

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Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clifford C Shaw
Primary Examiner
Art Unit 1725

February 3, 2006